

794.2.7.

1. The reaction of some 2-substituted derivatives of 4-aminopyridine with nitrous acid. IV. 2-Methoxy-4-amino-pyridine. Tadeusz Talik and Edwin Płazek (Politechnika, Wrocław, Poland). *Roczniki Chem.* 33, 1343-8 (1959) (German summary); cf. *CA* 50, 12045f; 53, 18954d. — 4-Amino-2-methoxypyridine was able to be diazotized. 4-Hydroxy-2-methoxypyridine (m. 135°, yield 59.8%), 4-iodo- (b<sub>m</sub> 106°, 31.7%), 4-chloro- (m. 26°, b. 177-8°, 30.6%), 4-bromo- (b<sub>m</sub> 87°, 26.4%), 4-thiocyanato- (m. 62-3°, 11.2%), and 4-cyano-2-methoxypyridine (I) (m. 95°, 32.4%) were obtained from the diazonium compd. Thus, substitution of a first-order group (no double or semipolar bond) in 2-position made the 4-amino group like a normal aromatic amine. Hydrolysis of I gave 2-hydroxyisonicotinic acid. A. Kręglewski.

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TALIK, Zofia; TALIK, Tadeusz

On the reaction of 2-halogen and 3-halogen-4-nitropyridine  
N-oxides with phosphortrihalogenides. Roczniki chemii 36 no.3:417-423  
'62.

1. Katedra Chemii Organicznej I. Politechnika, Wrocław, i  
Zakład Chemii Organicznej Katedry Chemii, Wyższa Szkoła  
Ekonomiczna, Wrocław.

S/081/62/000/021/022/069  
B141/B101

AUTHORS: Talik, Tadeusz, Talik, Zofia

TITLE: Preparation of some derivatives of 4-nitro-pyridine N-oxide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 173, abstract 21Zh163 (Roczn. chem., v. 36, no. 3, 1962, 539-544 [Pol.; summary in Ger.])

TEXT: The action of a mixture of  $(CH_3CO)_2O$  and  $H_2O_2$  on pyridine,  $\alpha$ -picoline, 2,6-lutidine, 2-chloro-, 2-bromo-, 2-iodo-, 3-chloro-, 3-bromo-, and 3-iodo pyridine (Ia-i), followed by nitration, yields the N-oxides of 4-nitro-I (IIa-i). The structure of IIg, i was confirmed by conversion with aniline to the N-oxide of 3-anilino-4-nitro-pyridine (III). 30 g Ia dissolved in 150 ml  $(CH_3CO)_2O$  150 ml receives an addition of 30%  $H_2O_2$  in portions, the solution is left to stand for 5-6 hrs at 20°C and is then kept for 30 hrs at 60-65°C, the excess of reagents is evaporated in vacuo at 60°C, the residue is dissolved in 50 ml concentrated  $H_2SO_4$  and

Card 1/2

Preparation of some derivatives ...

S/061/62/000/021/022/069  
B141/B101

added in portions to a mixture of 50 ml concentrated  $H_2SO_4$ , 20 ml 20% fuming sulfuric acid, and 120 ml concentrated  $HNO_3$  (d 1.52); the mixture is kept for 90 min at  $100^\circ C$ , cooled, and poured onto ice, neutralized to  $pH = 4-5$  with solid  $(NH_4)_2CO_3$ , whereupon IIA is separated with concentrated  $NH_4OH$ , yield 63%, m.p.  $162^\circ C$  (from water). Likewise substance II is obtained (yield in %, m.p. in  $^\circ C$ ). b, 76.5, 155; c, 76.5, 156; d (here and below, 150 ml 30%  $H_2O_2$  is added and the mixture heated for further 30 hrs) 69.4, 154; e, 62.5, 145; f, 61.5, 146; g ( $C_5H_3ClN_2O_3$ ) (separated by extraction with  $CHCl_3$ ), 64.5, 115; h, 64.2, 152; i ( $C_5H_3IN_2O$ ) (obtained analogously to IIA), 56.4, 201. From the solution of 1 g IIg, 3 g aniline, and 20 ml alcohol which is boiled for 3 hrs and cooled, III,  $C_{11}H_9N_3O_3$ , is obtained, yield 0.7 g, m.p.  $197-198^\circ C$  (from alcohol). Analogously, III is obtained from 1 g Ili and 3 g aniline in 40 ml alcohol by boiling for 6 hrs, yield 0.6 g. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/021/023/069  
B141/B101

AUTHORS: Talik Zofia, Talik Tadeusz

TITLE: Effect of persulfuric acid on some 4-aminopyridine derivatives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 173, abstract 21Zh164 (Roczn. chem, v. 36, no. 3, 1962, 545-548 [Pol.; summary in Ger.])

TEXT: When 3-chloro-4-aminopyridine (I), 3-bromo-4-aminopyridine (II), and 2-bromo-4-aminopyridine (III) are brought into reaction with  $H_2S_2O_8$ , the products are 3-chloro-4-nitro-pyridine (IV), 3-bromo-4-nitro-pyridine (V) and 2-bromo-4-nitro-pyridine (VI) respectively. Under analogous conditions, 2-chloro-, 2-iodo-, and 3-iodo-4-aminopyridine do not react with  $H_2S_2O_8$ . To 30 ml 20% fuming sulfuric acid 20 ml  $H_2O_2$  is added dropwise under cooling by a mixture of ice and salt, then 2.5 g I dissolved in 7.5 ml concentrated  $H_2SO_4$  is introduced at  $0^\circ C$ , the mixture is left to stand for 24 hrs at  $20^\circ C$ , poured onto ice, and neutralized with solid

Card 1/2

Effect of persulfuric acid on ...

S/061/62/000/021/023/069  
B141/B101

$(\text{NH}_4)_2\text{CO}_3$ ; the precipitate is dissolved in ether, and evaporation of the solvent produced the compound IV,  $\text{C}_5\text{H}_2\text{ClN}_2\text{O}_2$ , yield 71.2%, m.p. 25-26°C (from benzene). Analogously V,  $\text{C}_6\text{H}_2\text{BrN}_2\text{O}_2$ , is obtained from 2.5 g II, yield 65.2%, m.p. 66-67°C. When 1 g III is brought into reaction with 3 ml  $\text{H}_2\text{SO}_4$  and  $\text{H}_2\text{S}_2\text{O}_8$  (from 8 ml  $\text{H}_2\text{O}_2$  and 12 ml 20% fuming sulfuric acid), VI is obtained, yield 76.7%, m.p. 62°C (from alcohol). [Abstracter's note: Complete translation.]

Card 2/2

WIECZOREK, Jan Sylwester; TALIK, Tadeusz

Preparation and some reactions of 3-bromo-4,5-diaminopyridine.  
Rocz chemii 36 no.5:967-970 '62.

1. Katedra Chemii Organicznej I, Politechnika, Wroclaw, i  
Katedra Chemii, Zaklad Chemii Organicznej, Wyzsza Szkola  
Ekonomiczna, Wroclaw.

TALIK, Tadeusz

Certain reactions of 3-halogen-4-nitropyridine N-oxides. *Recs chemii* 36 no.10:1465-1475 '62.

1. Katedra Chemii Organicznej I Politechnika, Wrocław, i Katedra Chemii, Zakład Chemii Organicznej, Wyższa Szkoła Ekonomiczna , Wrocław.



TRIE, Tadeusz

Relative reactivity of halogens in some 3-halogen derivatives of  
pyridine and their N-oxides. Roczn. chemii 36 no.11:162-173  
1962.

1. Katedra Chemii Organicznej I, Politechnika, Wrocław, i  
Katedra Chemii, Zakład Chemii Organicznej, Wyższa Szkoła  
Ekonomiczna, Wrocław.

TALIK, Tadeusz

Some reactions of 3-halogen-4-nitropyridines. Roczniki chemii 37  
no.1:69-74 1963.

1. Zaklad Chemii Organicznej, Wyzsza Szkola Ekonomiczna,  
Wroclaw.

TALIK, Tadeusz; TALIK, Zofia

Reaction of 2-hydroxy-4-aminopyridine with nitrous acid. Roczniki chemii 37 no.1:75-80 '63.

1. Zaklad Chemii Organicznej, Wyzsza Szkola Ekonomiczna, Wroclaw.

TALIK, Tadeusz

Reaction of 3-brom-4-nitropyridine N-oxide with amino acids.  
Rocz chemii 37 no.4:495-497 '63.

1. Zaklad Chemii Organicznej, Wyzsza Szkola Ekonomiczna, Wroclaw.

TALIK, ZONA

POL.

Syntheses of pyridine analogs of p-aminosalicylic acid. Tadeusz Talik and Zona Talik. *Acta Polon. Pharm.* 11, 71-5 (1954) (English summary). By the Kolbe-Schmidt method, modified by Marnasse (Ger. 73,279 and 78,708), 2-amino-6-hydroxy-6(?) (I), and 3-amino-5-hydroxy-6(?) pyridinecarboxylic acid (II) have been prepd. I is obtained in 78.5% yield by heating 2-amino-6-hydroxypyridine with anhyd.  $K_2CO_3$  under a  $CO_2$  atm. in an autoclave 3-4 hrs. at about  $200^\circ$ , treating the mixt. with hot  $H_2O$ , filtering, and pptg. the product with glacial  $AcOH$ ; it is *difficultly* sol. in cold  $H_2O$ , alc.,  $C_6H_6$ ,  $CHCl_3$ , and acetone, and decomp.  $185^\circ$ . By the same procedure (reaction time 7-8 hrs.) 3-amino-5-hydroxypyridine yields II, isolated as the Cu salt, which with  $H_2S$  soln. gives 57% free II, m.  $304-5^\circ$ , sol. in hot  $H_2O$ , insol. in alc. and  $C_6H_6$ . Both acids are inactive against tubercle bacilli. Michael Dymick

85

TALIK, Zofia; PLAZEK, Edwin

Preparation of chlorides of 2- and 4-pyridino sulfonic acids and of 2- and 4-pyridonosulfonamides. Acta Poloniae pharm. 12 no.1: 5-12 1955.

1. I Katedra Chemii Organicznej Politechniki Wroclawskiej. Kierownik: prof. dr E.Plazek.

(PIPERIDINES, preparation of  
chloropiperidinesulfonic acids & chloropiperidinesulfonamides)  
(SULFONAMIDES, preparation of,  
chloropiperidinesulfonamides)

TALIK Z.

✓ Synthesis of pyridinesulfohydroxamic acids. Z. Talik and T. Talia (Polytech., Wrocław, Poland). *Acta Polon. Pharm.* 12, 213-22 (1955) (English summary).—2, 3, and 4-Pyridinesulfohydroxamic acids (I), (II), and (III), resp., prepd. by the reaction of the corresponding sulfonyl chlorides with hydroxylamine showed only a small tuberculostatic activity in experiments *in vitro*. Na (2 g.) is dissolved in 30 ml. abs. EtOH and added below 40° to 7 g.  $\text{NH}_4\text{OH} \cdot \text{HCl}$  (IV) in 5 ml. water. To the filtered soln., 2-pyridinesulfonyl chloride [obtained from 4 g. mercaptopyridine (cf. *ibid.* 5-12)] is added in portions below 30° and the mixt. kept 10 min., the EtOH is distd. *in vacuo*, 5 ml. water added, the soln. heated with C at 90° and filtered, and the ppt. crystd. from water to give I, m. 129-30° (decompn.). II is obtained by adding 13 g. IV in 10 ml. of water to a soln. of 4.25 g. Na in 60 ml. abs. EtOH at 40°, filtering off the NaCl, adding 3-pyridinesulfonyl chloride to the filtrate, filtering off IV, evapg. the filtrate and recrystg. the residue from water; II m. 149-51° (decompn.). III is obtained similarly (no m.p. is reported).

R. Dowbenko

WALL, G.; WALKER, G.

"Nitration of 2-chloro-4-aminopyridine."

p. 1170 (Roczniki Chemii) Vol. 30, no. 4, 1956  
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958



Synthesis of certain derivatives of thiocyanacetic acid hydrazide. Zofia Talik and Edwin Plażek (Politechnika, Wrocław, Poland). *Roczniki Chem.* 33, 379-85 (1959) (German summary). Attempts to prep.  $\text{NCSCCH}_2\text{CONHNH}_2$  (I) were unsuccessful, but 3 stable hydrazones  $\text{NCSCH}_2\text{CONHNH:CHR}$  (II), of I were obtained as described below. Into 3.6 g.  $\text{PhCH:NNH}_2$  in 10 ml.  $\text{C}_2\text{H}_5\text{N}$  at  $-30^\circ$  was dropped 3.4 g.  $\text{ClCH}_2\text{COCl}$  in 20 ml.  $\text{Et}_2\text{O}$ , the mixt. then poured into 400 ml.  $\text{H}_2\text{O}$ , and the solid filtered off and recrystd., from  $\text{H}_2\text{O-EtOH}$  to yield 3.4 g.  $\text{ClCH}_2\text{CONHNH:CHR}$  (III) ( $\text{R} = \text{Ph}$ ), m.  $164^\circ$ . Similarly were obtained the analogs III ( $\text{R} = m\text{-O}_2\text{NC}_6\text{H}_4$ ), m.  $207^\circ$ , and III ( $\text{R} = o\text{-HO-C}_6\text{H}_4$ ), m.  $198\text{-}9^\circ$ . III with  $\text{KSCN}$  in  $\text{Me}_2\text{CO}$  gave II ( $\text{R} = \text{Ph}$ ), m.  $251^\circ$  (alc.), II ( $\text{R} = m\text{-O}_2\text{NC}_6\text{H}_4$ ), m.  $278^\circ$  (AcOH); and II ( $\text{R} = o\text{-HO-C}_6\text{H}_4$ ), m.  $295^\circ$  (decompn.) ( $\text{C}_6\text{H}_5\text{N}$ ). IIa ( $\text{R} = \text{Ph}$ ) and IIb ( $\text{R} = m\text{-O}_2\text{NC}_6\text{H}_4$ ) showed strong tuberculostatic action *in vitro*. Double hydrazides of chloro-, m.  $161^\circ$ , and thiocyanacetic acid, decomp.  $200^\circ$ , were also prepd. A. Kreglenz

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4E3L

2 g. (NB)

g. g.

TALIK, Z.; PLAZEK, E.

Investigations on 2-chloro-3,5-dinitropyridine. I. Exchange reactions of the halogen atoms. II. Experiments comparing the movability of the halogen atom. III. Possibilities of using 3,5-dinitro-2-chloropyridine in investigations on protein adsorption and amino acids. *Bul chim PAN* 8 no.5:219-230 '60. (EEAI 10:9/10)

1. Katedra Chemii Organicznej I., Politechnika, Wrocław. Presented by T. Urbanski.

(Chloro-dinitropyridine) (Halogens)  
(Amino acids) (Proteins)

Distr: 4E3d

9  
✓ 2-Chloro-3,5-dinitropyridine. Zofia Talik and Edwin  
Plažek (Tech. School, Wrocław, Poland). *Roczniki Chem.*  
34, 135-76 (1960).—Several expts. concerning the unusually  
high mobility of the Cl atom in 2-chloro-3,5-dinitropyridine  
were carried out, in particular the substitution of the former  
by OH, OMe, OEt, OCH<sub>2</sub>CH<sub>2</sub>O, OPh, SPh, SH, —SS—,  
—S—, SCN, and —CN groups. Some expts. were carried  
out for this purpose on 2-bromo-3,5-dinitropyridine. The  
high mobility of the halogen atom in these compounds was  
confirmed. M. Tremlner

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2-jag(NB)(may)  
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TALIK, Zofia

Research on 2-chloro-3,t-dinitropyridine. II. Reactions with animes.  
Rocz chemii 34 no.2:465-474 '60. (EEAI 10:1)

1. Katedra Chemii Organicznej I Politechniki, Warszawa.  
(Chlorodinitropyridine) (Amines)

TALIK, Zofia

Investigations on 2-chloro-3,5-dinitropyridine. III. The relative reactivity of halogen. Roczniki chemii 34 no.3/4:917-924 '60.

(EEAI 10:3)

1. Katedra Chemii Organicznej I Politechniki, Wrocław.  
(Halogens) (Chlorodinitropyridine)

S/081/62/000/013/015/054  
B158/B144

6-10

AUTHOR:

Talik, Z.

TITLE:

Substitution of a halogen and a nitro-group in N-oxides of 2-halogen-4-nitropyridine

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 13, 1962, 245, abstract 132h217 (Bull. Acad. polon. sci. Ser. sci. chim., v. 9, no. 9, 1961, 561-565)

TEXT: For the study of the mobility of a halogen and the NO<sub>2</sub> group in N-oxides of 2-halogen-4-nitropyridine (I 4-nitropyridine), the latter were reacted with NaOCH<sub>3</sub> and NaOC<sub>2</sub>H<sub>5</sub> at 20°C. the NO<sub>2</sub> group being easily substituted on the alkoxyl; the halogen was not very active under these conditions. In a reaction of 1 mole of the starting substance with 2 moles of NaOCH<sub>3</sub> under severe conditions (boiling), the halogen may be replaced by an alkoxyl. In a reaction with Fe(OH)<sub>2</sub> or PCl<sub>3</sub> (heating), the N-oxides of 2-halogen-4-alkoxypyridines lose the O atom. Under the

Card 1/4

S/081/62/000/013/015/054  
B158/B144

Substitution of a halogen and a ...

effect of  $\text{NH}(\text{CH}_3)_2$  or  $\text{NH}(\text{C}_2\text{H}_5)_2$ , N-oxides of 2-halogen-I are easily converted to N-oxides of dialkylamino-I, which by reacting with  $\text{PCl}_3$  in  $\text{CHCl}_3$  are converted to 2-dialkylamino-I; the latter are converted to 2-dialkylamino-4-aminopyridines (II 4-aminopyridine) by strong reducing agents. When N-oxides of 2-halogen-I are reacted with  $\text{NH}_2\text{NH}_2 \cdot \text{H}_2\text{O}$  in alcohol, various mixtures are formed; only in one case is it possible to separate the N-oxide of 2-iodine-II. By the methods described, the

following were obtained (product obtained, yield %, m. p. in  $^\circ\text{C}$ , m. p. in  $^\circ\text{C}$  of picrate (supplements in brackets) are given): N-oxide of 2-chloro-4-methoxy pyridine (III 4-methoxy pyridine), 84.1, 82 (from benzene-amine), 141; N-oxide of 2-bromo-III, 85.4, 55, (from benzene), 145; N-oxide of 2-iodo-III, 88.6, 89 (from water), 142; 2-chloro-III, 83.4 (b. p. 229-230 $^\circ\text{C}$ ), -, 168; 2-bromo-III, 74.6 (b. p. 121 $^\circ\text{C}/10$  mm), -, 115; 2-iodo-III, 74.6, 35 (from benzene), 154; N-oxide of 2,4-dimethoxy pyridine, 72.1, 85 (from benzene), -; 2,4-dimethoxy pyridine, 62.6 (b. p. 200-201 $^\circ\text{C}$ ), -, 159; 2-chloro-4-ethoxy pyridine, 66.4, 55-57 (from

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B158/B144

Substitution of a halogen and a ...

benzine), 135; 2-bromo-4-ethoxy pyridine, 49.3, 38 (from benzine), 115; 2-iodo-4-ethoxy pyridine, 69.2, (b. p.  $145^{\circ}\text{C}/11\text{ mm}$ ) -, 133; N-oxide of 2-dimethylamino-I, 74.8, 126 (from benzine-benzene), -; N-oxide of 2-diethylamino-I, 62.3, 90 (from benzene-benzine), -; 2-dimethylamino-I, 61.7, 90 (from benzine-benzene), -; 2-diethylamino-I, 75.8, 33 (from benzine), -; 2-dimethylamino-II, 62, 151 (from water, 216 (various); 2-diethylamino-II, 76.7, 117 (from aqueous alcohol), 172; N-oxide of 2-iodo-II, 40.6, 110 (various; from water), 189. The solubilities of the enumerated compounds in water, alcohol,  $\text{C}_6\text{H}_6$  and  $\text{CHCl}_3$  are given.

N-oxides of 2-halogen-III are unstable in air, at  $0^{\circ}\text{C}$  they can be preserved for a long period, at  $20^{\circ}\text{C}$  they rapidly decompose, and at  $100^{\circ}\text{C}$  they ignite; 2-halogen-4-alkoxy pyridines are completely stable. Results are given of a quantitative study of the mobility of the halogen (determined by Volhard's method) and of the  $\text{NO}_2$  group (conditionally, from the amount of  $\text{NaOCH}_3$  consumed) in reactions with  $\text{NaOCH}_3$  at  $20^{\circ}\text{C}$  and with boiling in alcohol and with  $\text{NH}(\text{C}_2\text{H}_5)_2$  (with boiling in alcohol); these

Card 3/4



Substitution of a halogen and a ...

S/081/62/000/013/015/054  
B158/B144

show that the 4-NO<sub>2</sub> group is considerably more reactive towards NaOCH<sub>3</sub> than 2-halogen in the pyridine ring. Of the halogens, in relation to NaOCH<sub>3</sub>, the most mobile is Cl, the least mobile I; a difference in the mobility of Cl, Br and I is observed (at a relatively high reactivity) also with respect to NH(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>; the most mobile is Br, the least mobile I. 6 references. [Abstracter's note: Complete translation.]

Card 4/4

TALIK, Z.

Substitution reactions of halogens and the nitro group in 2-halogen-4-nitropyridines. Bul chim PAN 9 no.9:567-569 '61.

1. Katedra Chemii Organicznej I., Politechnika, Wroclaw. Presented by T. Urbanski.

TALIK, Z.

The relative mobility of the halogen atoms in 2-halogenpyridines and N-oxides of the 2-halogenpyridines. Bul chim PAN 9 no.9:571-574 '61.

1. Katedra Chemii Organicznej, Politechnika, Wroclaw. Presented by T. Urbanski.

TALIK, Zofia; TALIK, Tadeusz

On the reaction of 2-halogen and 3-halogen-4-nitropyridine  
N-oxides with phosphotrihalogenides. Roczniki chemii 36 no.3:417-423  
'62.

1. Katedra Chemii Organicznej I. Politechnika, Wrocław, i  
Zakład Chemii Organicznej Katedry Chemii, Wyższa Szkoła  
Ekonomiczna, Wrocław.

S/081/62/000/021/022/069  
B141/B101

AUTHORS: Talik, Tadeusz, Talik, Zofia

TITLE: Preparation of some derivatives of 4-nitro-pyridine N-oxide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 173, abstract  
21Zh163 (Roczn. chem., v. 36, no. 3, 1962, 539-544 [Pol.;  
summary in Ger.]

TEXT: The action of a mixture of  $(CH_3CO)_2O$  and  $H_2O_2$  on pyridine,  $\alpha$ -picoline, 2,6-lutidine, 2-chloro-, 2-bromo-, 2-iodo-, 3-chloro-, 3-bromo-, and 3-iodo pyridine (Ia-i), followed by nitration, yields the N-oxides of 4-nitro-I (IIa-i). The structure of IIg, i was confirmed by conversion with aniline to the N-oxide of 3-anilino-4-nitro-pyridine (III). 30 g Ia dissolved in 150 ml  $(CH_3CO)_2O$  150 ml receives an addition of 30%  $H_2O_2$  in portions, the solution is left to stand for 5-6 hrs at  $20^\circ C$  and is then kept for 30 hrs at  $60-65^\circ C$ , the excess of reagents is evaporated in vacuo at  $60^\circ C$ , the residue is dissolved in 50 ml concentrated  $H_2SO_4$  and

Card 1/2

Preparation of some derivatives ...

S/081/62/000/021/022/069  
B141/B101

added in portions to a mixture of 50 ml concentrated  $H_2SO_4$ , 20 ml 20% fuming sulfuric acid, and 120 ml concentrated  $HNO_3$  (d 1.52); the mixture is kept for 90 min at  $100^\circ C$ , cooled, and poured onto ice, neutralized to pH = 4-5 with solid  $(NH_4)_2CO_3$ , whereupon Ila is separated with concentrated  $NH_4OH$ , yield 63%, m.p.  $162^\circ C$  (from water). Likewise substance II is obtained (yield in %, m.p. in  $^\circ C$ ): b, 75.5, 155; c, 76.5, 156; d (here and below, 150 ml 30%  $H_2O_2$  is added and the mixture heated for further 30 hrs) 69.4, 154; e, 62.5, 145; f, 61.5, 148; g ( $C_5H_3ClN_2O_3$ ) (separated by extraction with  $CHCl_3$ ), 64.5, 115; h, 84.2, 152; i ( $C_5H_3IN_2O$ ) (obtained analogously to Ila), 56.4, 201. From the solution of 1 g IIg, 3 g aniline, and 20 ml alcohol which is boiled for 3 hrs and cooled, III,  $C_{11}H_9N_3O_3$ , is obtained, yield 0.7 g, m.p.  $197-198^\circ C$  (from alcohol). Analogously, III is obtained from 1 g Ili and 3 g aniline in 40 ml alcohol by boiling for 6 hrs, yield 0.6 g. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/021/023/069  
B141/B101

AUTHORS: Talik Zofia, Talik Tadeusz

TITLE: Effect of persulfuric acid on some 4-aminopyridine derivatives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 173, abstract 21Zh164 (Roczn. chem, v. 36, no. 3, 1962, 545-548 [Pol.; summary in Ger.])

TEXT: When 5-chloro-4-aminopyridine (I), 3-bromo-4-aminopyridine (II), and 2-bromo-4-aminopyridine (III) are brought into reaction with  $H_2S_2O_8$ , the products are 5-chloro-4-nitro-pyridine (IV), 3-bromo-4-nitro-pyridine (V) and 2-bromo-4-nitro-pyridine (VI) respectively. Under analogous conditions, 2-chloro-, 2-iodo-, and 5-iodo-4-aminopyridine do not react with  $H_2S_2O_8$ . To 30 ml 20% fuming sulfuric acid 20 ml  $H_2O_2$  is added dropwise under cooling by a mixture of ice and salt, then 2.5 g I dissolved in 7.5 ml concentrated  $H_2SO_4$  is introduced at  $0^\circ C$ , the mixture is left to stand for 24 hrs at  $20^\circ C$ , poured onto ice, and neutralized with solid

Card 1/2

Effect of persulfuric acid on ...

S/081/62/000/021/023/069  
B141/B101

$(\text{NH}_4)_2\text{CO}_3$ ; the precipitate is dissolved in ether, and evaporation of the solvent produced the compound IV,  $\text{C}_5\text{H}_3\text{ClN}_2\text{O}_2$ , yield 71.2%, m.p. 25-26°C (from benzene). Analogously V,  $\text{C}_5\text{H}_3\text{BrN}_2\text{O}_2$ , is obtained from 2.5 g II, yield 85.2%, m.p. 66-67°C. When 1 g III is brought into reaction with 3 ml  $\text{H}_2\text{SO}_4$  and  $\text{H}_2\text{S}_2\text{O}_8$  (from 6 ml  $\text{H}_2\text{O}_2$  and 12 ml 20% fuming sulfuric acid), VI is obtained, yield 76.7%, m.p. 62°C (from alcohol). [Abstracter's note: Complete translation.]

Card 2/2



TALIK, Zofia

Research on the relative mobility of halogen atoms in 2-halogen pyridines and 2-halogen pyridine-N-oxides. Roczniki chemii 36 no.7/8:1183-1189 '62.

1. Katedra Chemii Organicznej I, Politechnika, Wrocław.

TALIK, Zofia

Certain reactions of 2-halogen-4-nitropyridine. Roczniki chemii 36  
no.9:1313-1320 '62.

1. Katedra Chemii Organicznej I, Politechnika, Wrocław.

TALIK, Tadeusz; TALIK, Zofia

Reaction of ~~2-hydroxy-4-aminopyridine~~ with nitrous acid. Pocz  
chemii 37 no.1:75-80 '63.

1. Zaklad Chemii Organicznej, Wyzsza Szkola Ekonomiczna,  
Wroclaw.

KHAUG, N.A. [Haug, N.]; kand.med.nauk (Tallin, ul. Roopa, d.19, kv.7);  
TALIKHARM, A.A. [Taliharm, A.]

"Double block" following the use of lystenone. Vest. khir. 91  
no.7:66-67 JI'69 (MIRA 16:12)

1. P. Instituta eksperimental'noy i klinicheskoy meditsiny  
BN Estonskoy SSR (dir.- doktor med. nauk P.A.Bogovskiy) i  
Tallinskoy gorodskoy tuberkuleznoy bol'nitsy (glavnyy vrach  
L.N.Os'minina).

TALIKOV, M.A.; BAKHOLDIN, S.V.; SERAVKIN, K.A.

Conveyors with a bushing-roller chain. Perm. i spirt, prom. 30  
no.1:32-33 '64. (MIRA 17:11)

1. Ryazanskiy likero-vodochnyy zavod.

TALIKOV, H.A.

Pathogenesis of pathological processes in the kidneys in pulmonary tuberculosis. Sbor. trud. Uz. nauch.-issl. tub. inst. 3:186-190  
'57. (MIRA 14:5)

(TUBERCULOUS)

(KIDNEYS--DISEASES)

IERMUKHAMEDOV, A.A.; TALIKOV, N.A.

Renal functional and morphological changes in liver cirrhosis.  
Med. zhur. Uzb. no.5:40-43 My'63 (MIRA 17:1)

1. Iz kafedry terapii ( zav. - prof. A.S. Mushkin) i kafedry  
patologicheskoy anatomii ( zav. - prof. R.I. Denilova) Tash-  
kentского Instituta usovershenstvovaniya vrachev.

YANBAYEV, T.A.; TALIMOV, N.A.

Clini oanatomical comparisons of renal changes in suppurative processes in the body. Khirurgiya 39 no.8:98-100 Ag '63.  
(MIRA 17:6)

1. Iz khirurgicheskogo otdeleniya Tashkentskoy klinicheskoy bol'nitsy neodlozhnoy pomoshchi (nauchnyy rukovoditel' - prof. S.A. Masumov; glavnyy vrach - zasluzhennyy vrach Uzbekskoy SSR T.Sh. Alimov).



TALIKOWA, Zofia

Chemical Abst.  
Vol. 48 No. 3  
Feb. 10, 1954  
Organic Chemistry

② Chem  
Chemistry of pyridine 1-oxide. Zofia Talikowa (Higher  
Polytech. School, Wrocław, Poland). Wiedomości Chem. 7,  
167-88 (1953).--The following topics are reviewed: Substi-  
tution reactions of pyridine 1-oxide (I), chem. properties of  
substituted I, and reduction of the nitro deriv. of I with and  
without the cleavage of N-C bond. 35 references.  
Adam Sporyński

8-37-54  
JJP

CICHOCKI, T.; RUTA, R.; TALIKOWSKA, H.

The distribution of some hydrolytic enzymes in the nephridium of the earthworm (*Lumbricus terrestris* L.). *Folia biol* 11 no.1: 69-83 '63.

1. Department of Histology, Medical Academy, Krakow. Head: J. Ackermann, Ph.D.

4

*772-730500, 4/10/56*  
GOLDSCHMIED, Aleksander; RAKAJSKA, Zofia; TALIKOWSKI, Wacław; BODZINSKA, Irena

Effect of intra-oral bile on the course of infectious jaundice. Polski  
tygod. lek. 12 no.34:1319-1320 19 Aug 57.

1. (Z Oddziału zółtaczek Kliniki Chorob Zakaźnych A.M. w Łodzi; ówczesny  
kierownik Kliniki: prof. dr A. Goldschmied). Adres: Warszawa, ul.  
Kasprzaka 17; III Zakład Chorob Wewn. Instytutu Dosk. i Specj. Kadr Lek.

(BILE, therapeuticuse,  
hepatitis, infect., intra-oral admin. (Pol))

(HEPATITIS, INFECTIOUS, therapy,  
bile, intraoral admin. (Pol))

TALIMAA, R.Yu.

Data from a study of specific and nonspecific reactivity in patients with tuberculosis of the lungs during combined treatment with antibacterial preparations and tuberculin. Probl.tub. 38 no.7:53-59 '60. (MIRA 14:1)

1. Iz Instituta tuberkuleza (dir. - chlen-korrespondent AMN SSSR N.A. Shmelev, nauchnyy rukovoditel' - doktor med.nauk F.L. Elinson) AMN SSSR.

(TUBERCULOSIS)

TALIMAA, R. Yu., Cand. Medic. Sci. (diss) "Changes of Allergical Reactivity in Patients with Tuberculosis of Lungs with Treatment Anti-bacterial Preparations and Tuberculin," Moscow, 1961, 23 pp. (Acad. Med. Sci. USSR) (KL Supp 12-61, 289).

TALIMAA R. (med. m. kand.

An automatic spiograph without the water spirometer. Sveik.  
Apsaug. no. 3:39-43 '64.

1. Lietuvos respublikinis tuberkuliozes mokslinio tyrimo  
institutas.

TALIMAA R.<sup>Yu</sup>, med.m.kand.

An automatic spiograph from a common water spirometer.  
Sveik. apsaug. 9 no.3:39-43 Mr'64

1. Tuberkuliozes m.t. institutas.

\*

TALIMAY, D. A. T.

Identification of atypical dysentery bacteria. Zhur. mikrobiol.  
epid. i immu. 28 no. 4: 95-97 and 157. (KLM: 10-10)

1. In Tartusko gosudarstvennogo universiteta.  
(SHIGELLA DYSENTERIAE)

Identification of atypical strains by biochem. &  
immunol. characteristics.



TALMEYSTER, E.T.; RAUDSIK, T.A.

Study of the pathogenic properties of some freshly isolated  
enteropathogenic Escherichia coli of various serological types.  
Zhur. mikrobiol., epid. i immun. 42 no.7:21-24 J1 '65.

(MIRA 18:11)

1. Tartuskiy gosudarstvennyy universitet.

~~ТАЛИОНОВА, Е. П.~~  
~~Куролсов, А. И., and Е. П. ТАЛИОНОВА.~~

Vliianie zakruchivaniia lopasti na aerodinamicheskie kharakteristiki avtozira. Moskva, 1939. 34 p., diagrs. (TSANI. Trudy, no. 396)

Bibliography: p. 34.

Title tr.: Effect of blade twist on the aerodynamic characteristics of an autogyro.

JA911.X65 no. 396

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

TALIN, A.A.

Continuous action horizontal sterilizers. Kons. i ov. prom. 14  
no.10:23-24 0 '59. (MIRA 12:12)

1.Izmail'skiy konservnyy kombinat.  
(Sterilization)

TALIN, A. A. ; SLYUSARENKO, N. A.

Production of grape juice at the Izmayl Cannery. Kons. i ov. prom.  
15 no. 10:6-8 0 '60. (MIRA 13:10)

1. Izmail'skiy konservnyy kombinat.  
(Izmayl--Grape juice)

TALIN, A.O.

Aseptic preservation of food in the United States. Khar.prom.  
no.2:91-94 Ap-Je '62. (MIRA 15:9)

1. Izmail'skiy konservnyy kombinat.  
(United States—Canning and preserving)

BUTYAGINA, A.P.; VORONKOVA, O.I.; TALINSKAYA, A.F.; USHAKOVA, S.P.

Studying outbreaks of Botkin's disease in children's institutions.  
Sov.med. 19 no.12:55-59 D '55. (MLR 10:9)

1. Iz Instituta virusologii AN SSSR i Moskovskogo oblastnogo  
nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.  
Vladimirovskogo  
(HEPATITIS, ILLUSTIOUS)

ITSELIS, F. G.; YAMPOL'SKAYA, E. I.; ZALANZON, Ye. S.; MIL'NER, B. I.;  
ROZENBAUM, G. I.; TALINSKAYA, A. F.

Focus of mixed diseases due to poliomyelitis and Coxsackie  
[viruses] in a children's collective. *Pediatrics* no.6:15-19  
'62. (MIRA 15:6)

1. Iz sanitarno-epidemiologicheskoy stantsii Moskvyy i Instituta  
pediatrii Ministerstva zdravookhraneniya RSFSR.

(POLIOMYELITIS) (COXSACKIE VIRUSES)

GRINEVICH, A.G.; TALPOV, B.T.

Sensitivity of *Streptococcus diacetylactis* cultures to gamma  
rays. Uzb. biol. zhur. 7 no.4:62-67, 1965 (MIRA 17:4)

1. Institut botaniki AN UzSSR.



KARGIN, V.A.; SOGOLOVA, T.I.; TALIPCV, G.Sh.

Plasticization of crystalline polymers. Part 1: Plasticization  
of isotactic polystyrene and polyethylene terephthalate.  
Vysokom.soed. 1 no.11:1670-1677 N '59. (MIRA 13:5)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.  
(Styrene) (Terephthalic acid)

S/C20/62/142/003/021/027  
B101/B110

AUTHORS: Kargin, V. A., Academician, Sogolova, T. I., and Talipov, G. Sh.

TITLE: Structure formation in crystalline polystyrene

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 3, 1962, 627-628

TEXT: The authors studied the formation of supermolecular structures in crystalline, isotactic polystyrene. The sample was fused onto an object glass, brought to test temperature (120, 145, 175°C) in a thermostat, and the structure formation was investigated and photographed in polarized light with 200 - 600fold magnification by means of an MHH-8 (MIN-8) microscope. The structure formation was found to be a complicated process, not ceasing with the formation of spherulites. Spherulites both grow and aggregate. At high temperature and prolonged crystallization, the number of growth centers is small, and regular spherulites are formed without disturbances. At low temperature, the growing rate is low but the number of centers is large. In this case, aggregation to bands takes place (Length 25 - 500μ, width 1 - 120μ). Spherulites united to bands grow only

Card 1/2

Structure formation in crystalline...

S/020/02/142/003/021/027  
B101/B110

in width (possibly also in thickness) until laminae are formed and the growth ceases. The bands in one lamina are ordered, but their position in superimposed laminae does not coincide. The time of crystallization has the same effect on the formation of supermolecular structure as temperature has. Thus, systems of a desired structure can be produced. No molecules or molecule packages but spherulites of the order of magnitude of colloidal particles act as structural units in polymer systems. A similarity with the formation of gels and jellies is assumed. There are 4 references: 3 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: P. Dannusso, G. Moraglio, J. Polymer Sci., 21, 161 (1957).

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: October 11, 1961

Card 2/2

S/020/62/142/004/015/022  
B101/B110

15.8100  
AUTHORS: Kargin, V.A., Academician, Sogolova, T.I. and Talizov, I.Sh.  
TITLE: Structure formation in plasticized crystalline polystyrene  
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 4, 1962, 844-847

TEXT: Investigations of the supermolecular structure of nonplasticized polystyrene (DAN, 142, no. 3 (1962)) showed that secondary structures, bands or lamellas, composed of spherulites, developed between 110 and 215°C. The effect of plasticizers on structure formation and mechanical properties of polystyrene (PSt) was now investigated by the same method at 120, 145 and 175°C. The following data were found for the spherulite dimensions (in microns):

Duration of crystallization, min	Initial PSt	Concentration of plasticizer, % by volume						
		A		B		C		
		8	20	15	25	12	18	31
10	4	13	11	10	15	15	-	10
30	8	60	55	35	35	50	50	35
60	17	110	92	70	67	70	-	75
150	40	300	230	260	190	220	-	170

Card 1/2

Structure formation in..

S/G20/62/142/001/0.5/022  
B:01/B:10

A = cetyl chloride; B = dimethyl phthalate; C = dibutyl sebacate. Thus an increase in size of the spherulites occurred for all plasticizers, the formation of bands or lamellas, especially above 120°C, being suppressed. The effect of plasticizers was less marked at higher temperatures (175 - 215°C) since under such conditions the spherulites are slowly growing even in nonplasticized PST. The strength of plasticized PST increased with increasing plasticizer content (Fig. 4). X-ray pictures of initial and plasticized PST showed only slight differences. Accordingly, the effect of plasticizer does not consist in a change of the primary crystalline structure (of the spherulite) of the polymer but in a suppression of secondary-structure formation. This also causes a reduction in strength which was investigated at a temperature 25°C higher than the vitrification temperature. There are 4 figures, 1 table, and 2 Soviet references.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physics-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: October 26, 1961

Card 2/2

S/0190/63/005/012/1809/1816

ACCESSION NR: APL007979

AUTHORS: Kargin, V. A.; Sogolova, T. I.; Talipov, G. Sh.

TITLE: Supermolecular structure of plasticized and nonplasticized crystalline polystyrene

SOURCE: Vyssokomolekulyarnyye soyedineniya, v. 5, no. 12, 1963, 1809-1816

TOPIC TAGS: polymer, polystyrene crystalline, polystyrene, plasticized crystalline polystyrene, plasticization, plasticizer, secondary structure, globule, spherulite, bundle, rod, supermolecule structure formation, plasticized polystyrene mechanical property, polymer mechanical property, phthalic acid dimethyl ester, cetyl chloride, supermolecular structure

ABSTRACT: The supermolecular structure of plasticized (dimethyl-phthalate and cetyl chloride plasticizer) and nonplasticized crystalline polystyrene has been studied in temperature intervals from 110-215°C and at crystallization durations of 10 to 150 minutes. The structure-forming process was observed under a polarizing microscope MIN-8 with a 200-600 magnification. A new type of structuralization was discovered, in which spherulites serve as initial structure units, commensurable

Cord 1,2

ACCESSION NR: AP4007979

in dimension with the colloidal particle size. It was found that the plasticizer has a substantial effect on the nature and dimensions of crystalline polymer secondary structure, and a definite correlation was established between plasticized polymer macrostructure and its mechanical properties. Orig. art. has: 16 micro-photographs and 1 chart.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 24Apr62

DATE ACQ: 20Jan64

ENCL: 00

SUB CODE: MA

NO REF SOV: 004

OTHER: 001

Card 2/2





TALIPOV, M.A.; SKVALETSKIY, Ye.N.

Conditions of the Turgon Hydroelectric Power Station from the  
point of view of engineering geology. Izv. Ak. Kirg. SSR Ser. ust.  
i tekhn. nauch. i no. 6: 143-148 60. (1960, 1961)  
(Kirghizistan Hydroelectric power stations)

SUKHOVA, M.N.; ZAIROV, K.S.; GVOZDEVA, I.V.; ANDREYEVA, A.I.; NURULLAYEV, D.Kh.; TALIQOV, M.Z.; MOSUNOV, V.B.; STOROZHEVA, Ye.M.; IMSONOVA, A.M.; SHAMIRZAYEV, N.Yu.; AKMURZAYEV, T.A.

Fly control and its organization in Uzbekistan. Med.zhur.Uzb.  
no.3:3-14 Mr '62. (MIRA 15:12)

1. Iz TSentral'nogo nauchno-issledovatel'skogo dezinfektsionnogo instituta Ministerstva zdravookhraneniya SSSR (dir. - prof. V.I.Vashkov) i sanitarno-epidemiologicheskoy organizatsii Uzbekistana (glavnyy gosudarstvennyy sanitarnyy inspektor-kand.med.nauk K.S.Zairov).

(UZBEKISTAN--FLIES--EXTERMINATION)

KHAMRABAYEV, I.Kh.; TALIPOV, R.M.

Some results of biogeochemical (geobotanical) research in western  
Uzbekistan. Uzb. geol. zhurn. no.5:3-11 '60. (MIRA 13:11)

1. Institut geologii AN UzSSR.  
(Uzbekistan—Ore deposits) (Phytogeography)

TALIPOV, R.M.

Characteristics of the concentration of nonferrous metals in the soils and plants of the Sary-Gosku and Men-Kalach regions (Uzbekistan). Geokhimiia no.5:457-460 My '64. (MIRA 18:7)

1. Kh.M.Abdullaev Institute of Geology and Geophysics, Academy of Sciences, Uzbek Soviet Socialist Republic.

TALIPOV, S.

Waters of the petroleum and gas fields of the Tajik depression.  
Izv. vys. ucheb. zav.: nefte i gaz 6 no. 11.7-10 '63. (MIRA 17:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti  
im. akad. I. M. Gubkina.

TALIFOV, E.; SHIROKOV, V.Ya.

Waters and brines of the Mesozoic - Cenozoic sediments of the  
Tajik Depression in connection with their oil and gas potential.  
Neftegaz.geol. i geofiz. no.12:12-14, 1964.

(MIRA 18.3)

1. Moskovskiy ordena Trudovogo Krasa - Zheneni institut  
neftekhimicheskoy i gazovoy promyshlennosti, akad. Gorkiy.

TALIPOV, S.; VAGIN, S.B.; SHUGRIN, V.P.

Gas content characteristics of waters of the Mesocenozoic sediments  
in the southern Tajik depression. Izv. ys. ucheb. zav.; neft' i  
gaz. 7 no.10:15-18 '64. (MIRA 18:2)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti  
im. akad. I.M. Gubkina.

TALIFOV, S.

Bromine and iodine content of underground waters in the Mubarek group of oil and gas fields. Dokl. AN Uz. SSR 21 no.9:44-46 '64.

(MIRA 19:1)

1. Institut geologii i razrabotki neftyanykh i gazovykh mestorozhdeniy Gosudarstvennogo geologicheskogo komiteta SSSR.



2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

Use of fluorine compounds in chemical analysis. I. TANANAKY and S. TALIROV (Bull. Acad. Sci. U.R.S.S., 1938, Sér. Chim., 547—553).—For the separation of Be from Ca and Mg a slight excess of NaF is sufficient; for separation from Al and Fe, 0.5 and 1.5 g. per l., respectively, is necessary.

L. J. J.

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

REGION 1: 1-10000

REGION 2: 1-10000

REGION 3: 1-10000

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REGION 96: 1-10000

REGION 97: 1-10000

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REGION 100: 1-10000

COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX	
C11	7	<p><b>Determination of aluminum in the form of cryolite.</b>                      Iv. Tananayev and Sh. Talipov. <i>Zavodskaya Lab.</i> 8, 237 (1939).—Al was detd. both as <math>\text{Na}_2\text{AlF}_6</math> and <math>\text{K}_2\text{AlF}_6</math>. In detg. Al as <math>\text{Na}_2\text{AlF}_6</math> a definite amt. of 3.4% NaF soln. sufficient to ppt. all the Al is added to the <math>\text{AlCl}_3</math> and after 1-2 hrs. the contents are centrifuged. The clear soln. is shaken with 0.5% NaF soln. and centrifuged. After 2-3 such washings the ppt. is washed twice with 50% alc. until free of NaF and then dried at 120-130° to const. wt. In order to effect complete pptn. the ratio of NaF/<math>\text{AlCl}_3</math> should be at least 6.5-7. The variations between the calcd. and found <math>\text{Na}_2\text{AlF}_6</math> ranged from 0.0006 to 0.0020 g. In expts. in which the solns. were filtered instead of centrifuged the differences between the calcd. and found <math>\text{Na}_2\text{AlF}_6</math> varied from 0.0004 to 0.0028 g. In these expts. the ppt. and filter paper are ignited in a Pt crucible over a small flame without melting the ppt. In adding <math>\text{AlCl}_3</math> to NaF it was found that if the ratio NaF/<math>\text{AlCl}_3</math> is 10 the ppt. consists practically entirely of <math>\text{Na}_2\text{AlF}_6</math>. This condition prevailed up to a NaF/<math>\text{AlCl}_3</math> ratio of 40. In detg. the Al as <math>\text{K}_2\text{AlF}_6</math> the method of adding KF to the <math>\text{AlCl}_3</math> was not applicable because the results obtained were too low. In adding <math>\text{AlCl}_3</math> to the KF good results were obtained with a KF/<math>\text{AlCl}_3</math> ratio of 12 and higher. The differences between the <math>\text{Al}_2\text{O}_3</math> as taken and found experimentally varied from 0.0001 to 0.0007 g. In detg. Al in the presence of Be the following procedure was adopted: A mixt. of Al and Be chlorides is added to a NaF soln. dild. to 75-80 ml., the soln. is thoroughly mixed and after 1-2 hrs. the soln. is carefully siphoned off and the ppt. together with part of the soln. is centrifuged, thrice washed with 0.5% NaF soln. and then with aq. alc. (1:1). The ppt. is dried and weighed as <math>\text{Na}_2\text{AlF}_6</math>. The max. difference between the exptl. and calcd. <math>\text{Na}_2\text{AlF}_6</math> was 0.0056 g. B. Z. K.</p>	
		<p>ASB-11A METALLURGICAL LITERATURE CL</p>	

Solubility of the double fluorides of aluminum and of the basic metals. I. Lananary and Sh. Talipov. *J. Gen. Chem.* (U. S. S. R.) 9, 1156-7 (1939).—An exptl. method is given for the prepn. of  $\text{Na}_2\text{AlF}_6$ ,  $\text{K}_2\text{AlF}_6$  and  $(\text{NH}_4)_2\text{AlF}_6$  whose compns. correspond exactly to their formulas. The expts. were performed in a thermostat at 25° in vessels having Hg seals. Twelve hrs. was required for the satn. After the equil. had been reached a definite vol. was drawn and weighed. The analysis of

the dry residue corresponded to the formula  $\text{M}_2\text{AlF}_6$ . Expts. were also performed for the detn. of the soly. of  $\text{Na}_2\text{AlF}_6$  and of  $\text{K}_2\text{AlF}_6$  at different temps. At 0, 25, 50, 75 and 100° the soly. of  $\text{Na}_2\text{AlF}_6$  in g. 1000 g. of the soln. was 0.1180, 0.4170, 0.7032, 0.9102 and 1.3401 and that of  $\text{K}_2\text{AlF}_6$  in 1000 g. of the soln. 0.8601, 1.1288, 2.6125, 3.4511 and 4.5828, resp. The soly. of  $(\text{NH}_4)_2\text{AlF}_6$  at 0, 25, 50, 75, 100, 125, 150 and 175° was 1.3128, 7.0385, 12.3622, 12.1217, 11.7031, 11.2510, 11.0132, 7.4100, 6.0. In contrast to the soly. of  $\text{Na}_2\text{AlF}_6$  and  $\text{K}_2\text{AlF}_6$  the soly. of  $(\text{NH}_4)_2\text{AlF}_6$  does not rise steadily, but it has a max. at about 50°, after which it decreases sharply. At 100° and 25° the values for the soly. are the same. The unusual behavior of  $(\text{NH}_4)_2\text{AlF}_6$  is evidently due to a change in its cryst. structure. A supposition that the salt dissolves incongruently was not verified, since the salt dissolves. The difference in the solubilities of the investigated salts led to an attempt to use a soln. of  $(\text{NH}_4)_2\text{AlF}_6$  for the pptn. of the ions of Na and K. Preliminary expts. showed that both ions, used singly or together, were quantitatively pptd. as  $\text{Na}_2\text{AlF}_6$  and  $\text{K}_2\text{AlF}_6$ . Since the soly. of each ppt. was very small,

attempts were made to det. the amt. of Na and K by microchem. means. Three graphs, 3 tables and 3 references are given.

W. R. Henn

Inst. Sci. + Lang. Chem., AS, USSR

ADV. SER. METALLURGICAL LITERATURE CLASSIFICATION

1000-574-0000

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7

SEPARATION OF TITANIUM FROM ALUMINUM AND IRON WITH FLUORIDES. Sh. T. Talipov and Z. T. Sofelkova (Middle Asiatic State Univ.); *Zavodskaya Lab.* 13, 816-19 (1947).—It is proposed to utilize the differences in soly. for  $\text{Na}_2\text{TiF}_6$ ,  $\text{Na}_2\text{AlF}_6$ , and  $\text{Na}_2\text{FeF}_6$  in sepg. Ti from Al and Fe. To sepg. Ti from Al, add to the neutral soln. of  $\text{AlCl}_3$  and  $\text{TiCl}_3$  3–4 times as much  $\text{NaF}$  as required to form  $\text{AlF}_3$ . Filter off the  $\text{Na}_2\text{AlF}_6$  ppt. and wash with 0.5%  $\text{NaF}$  soln. and finally with  $\text{EtOH}$ . Filter and dry to const. wt. at 120–130°. To the filtrate add  $\text{HCl}$  or  $\text{H}_2\text{SO}_4$ , evap. to about 50 ml., and ppt. the Ti with cupferron. Wash with 2% cupferron soln., ignite, and weigh as  $\text{TiO}_2$ . Similarly, Fe can be sepd. from Ti with the Fe pptd. as  $\text{Na}_2\text{FeF}_6$ . In the filtrate, the Ti can be detd. by adding  $\text{H}_2\text{SO}_4$ , evapg. to distil off the F as  $\text{H}_2\text{SiF}_6$ , and finally titrating with ferric alum soln. H. Z. Kamich

434 314 METALLURGICAL LITERATURE CLASSIFICATION

TALIFOV, SH. F.

28936 Potenziometricheskom Titrovanii Ftortdov. Soobshch, 2. Zavodskaya Laboratoriya, 1949, No. 9 S. 1031-34-Bibltogr: 9 Nazv.

S0: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

Fluorine, 37.

Fluorine

Method of quantitative determination of fluorine and the use of fluorine compounds for determining other elements. *Srednaya.un.*, no. 27, 1947.

9. Monthly List of Russian Accessions, Library of Congress, 1942-1953, Uncl.

1. 1. 1.

Salikov, ~~Il'min~~ et. Khudoyev, V. A. "Thermodynamic analysis of systems using analytical interface. The system  $\text{BaF}_2\text{-HF-H}_2\text{O}$  at 25 degrees", Investiya Akad. Nauk Uzbek, 1986, No. 4, p. 5-10, (Article in Uzbek), - Bibliog: 15 items.

2. 3-44, 11 March, (Let's is Ughl Statey, No. 11, 1st.).

TALI, Sh. T.

32357

TALI, Sh. T. i ANTIPOV, V. Ye. Ob Otkrytii Mal'kikh Kolichyestv Zn, Ni, Co, Cu, Cd i Ni v Prisutstvii Bol'shikh Kolichyestv Khrom. Doklady Akad. Nauk 1/3 CCCP, 1949, No 9, s. 16-17. Prezyuriye Na Uzbyek. Yag--Bibliogr: s. 15

SO: Isotopicheskii Zhurnal'nykh Statey Vol. 4



TALIPOV, Sh T.

3

Chemical Abst.  
Vol. 48 No. 4  
Feb. 25, 1954  
Inorganic Chemistry

~~New method of synthesis of chromium sesquioxide. Sh. T. Talipov and V. E. Antinov (Inst. Chem. Acad. Sci. Uzbek. S.S.R.). Doklady Akad. Nauk Uzbek. S.S.R. 1949, No. 12, 27-9 (in Russian).—Pure  $\text{CrO}_3$  (40 g.), 240 g. 10% HF, 17 g. glucose, and 30 ml. EtOH, added in that order with agitation, until a spot test on filter paper shows green edges, gave  $\text{CrF}_3 \cdot 3\text{H}_2\text{O}$  in the soln. The latter was concd. on a steam bath to a paste, stirred with 50 ml. warm  $\text{H}_2\text{O}$ , kept overnight, filtered through a Pt Büchner funnel, washed with EtOH and cold  $\text{H}_2\text{O}$ , yielding 85-90% of product after 2 recrystns. Purity of 99.60% was established by analysis. G. M. Kosolapoff~~

7-27-54

**Potentiometric titration of fluorides.** Sh. T. Talipov and I. L. Teodorovich. *Zashchita Lab.* 15: 523-34 (1949).—In the potentiometric titration of F with  $\text{FeCl}_3$ , the potential break is not precisely at the equivalence point; it should be located by a graphic method given by Chirkov (C.A. 41, 3708d). The size of the break can be improved by Treidwell's method (C.A. 40, 1117\*) by adding 0.7 mg. of  $\text{FeCl}_3$  per ml. Addition of NaCl and KBr also improves the magnitude of the potential break. Iodides must be absent but Br, sulfate, and nitrate do not interfere. The  $\text{FeCl}_3$  soln. should be standardized directly against known NaF soln. G. M. Kosolovoff

G. M. Kosolapoff

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

Potentiometric titration of fluorides II. Sh. I. Talipov and I. L. Feodorovich. *Zashchita Laz.* 15, 1031-4 (1949); cf. *C.A.* 43, 80126. The best ratio of  $\text{Fe}^{III}/\text{Fe}^{II}$  with the sharpest potential break is approx. 3.5; addn. of 0.1 ml. of soln. which is 0.001 *M* in  $\text{FeCl}_3$  and 0.002 *M* in  $\text{FeCl}_2$  per 10-20 ml. of test soln. gives about 500 mv. ml. potential break at the equivalence pt. in titrations of solns. which are about 0.2 *M* in fluorides. Typical titration curves are shown. G. M. K.

TALIPOV, Sh.T.

Certain general problems in the analytical chemistry of fluorine.

Trudy SAGU no.15:67-84 '50.

(MLRA 9:5)

(Fluorine)

TALIPOV, Sh.T.; KHADMEYEV, V.A.

Physicochemical analysis of ternary aqueous solutions consisting of alkaline earth and magnesium fluorides and alkali metal fluorides. Ternary systems  $MgF_2$  --  $KF$  --  $H_2O$  and  $MgF_2$  --  $NaF$  --  $H_2O$  at 20°. Trudy SAGU no.15:85-100 '50. (MLRA 9:5)  
(Fluorides) (Solution (Chemistry))

CA

Physicochemical analysis of ternary aqueous systems of fluorides of alkaline earth metals and alkali metals. I. Ternary systems  $\text{BaF}_2\text{-KF-H}_2\text{O}$  and  $\text{BaF}_2\text{-NaF-H}_2\text{O}$ . Sh. T. Talipov and V. A. Khadeev (Central Asian State Univ., Tashkent). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 774-82 (1950); *J. Gen. Chem. U.S.S.R.* 20, 813-21 (Engl. translation).--The ternary systems were investigated by analyzing satd. solns. and wet residues according to the Schreinemaker method, all at 25°. No double salts or solid solns. are formed in either system. The soly. of  $\text{BaF}_2$  in KF and in NaF was detd. at concns. of alkali fluoride up to 0.5 M. The exptl. results agree well with those predicted by the Debye-Hückel theory in its 2nd approximation. Values for KF concn. (M) and for the soly. of  $\text{BaF}_2$  (M) are, resp.: 0.0,  $9.23 \times 10^{-3}$ ;  $1.067 \times 10^{-2}$ ,  $4.20 \times 10^{-3}$ ;  $5.011 \times 10^{-3}$ ,  $1.60 \times 10^{-3}$ ; 0.1001,  $7.5 \times 10^{-4}$ ; 0.5020,  $2.2 \times 10^{-4}$ . The values obtained for the soly. of  $\text{BaF}_2$  in NaF are similar. II. Ternary systems  $\text{SrF}_2\text{-KF-H}_2\text{O}$  and  $\text{SrF}_2\text{-NaF-H}_2\text{O}$ . *Ibid.* 783-8.--No double salts or solid solns. are formed in either system, the diagrams being qualitatively identical with those for the corresponding Ba compds. Soly. of  $\text{SrF}_2$  was studied at concns. of NaF and KF up to 0.01 M. Values of NaF concn. (M) and  $\text{SrF}_2$  soly. (M) are, resp.: 0.00,  $9.02 \times 10^{-3}$ ;  $1.905 \times 10^{-2}$ ,  $4.51 \times 10^{-3}$ ;  $3.090 \times 10^{-2}$ ,  $2.00 \times 10^{-3}$ ; 0.082  $\times 10^{-2}$ ,  $0.3 \times 10^{-3}$ ;  $1.006 \times 10^{-2}$ ,  $5.0 \times 10^{-4}$ . Data obtained with KF are similar. Arild J. Miller

TALIPOV, Sh. F.

Physico-chemical analysis of ternary aqueous systems containing  
fluorides of alkaline earth metals and magnesium and fluorides  
of alkali metals. II. Ternary systems strontium fluoride-potassium  
fluoride-water and strontium fluoride-sodium fluoride-water at 25  
°C. U.S. and N.S. standards, 1968. U.S. and N.S. standards, 1968.  
 No. 184, 1968. U.S. and N.S. standards, 1968. At 25°C. the  
 density of the systems  $\text{SrF}_2\text{-KHF}_2\text{-H}_2\text{O}$  and  $\text{SrF}_2\text{-NaHF}_2\text{-H}_2\text{O}$  up to  
 100 g. and 20 g.  $\text{SrF}_2$  at  $\text{NaF}$  concentration 10 g. No  
 crystalline precipitates formed. The solubility of  $\text{SrF}_2$   
 in  $\text{KHF}_2$  or  $\text{NaF}$  is accurately represented by the Debye-Hückel

formula. The density of the systems  $\text{SrF}_2\text{-KHF}_2\text{-H}_2\text{O}$  at  
 25°C. is accurately represented by the equation

TALIPOV, Sh.T.; ANTIPOV, V.Ye.

Investigation of solubility in the system chromium fluoride-sodium fluoride-water at 30°. Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R. 3, 206-13 '52.  
(CA 47 no.22:11930 '53) (MLRA 6:3)

1. Uzbek Acad. Sci., Tashkent.



TALIFOV, Sh.T.; ANTIPOV, V.Ye.

Separation of large quantities of chromium from small quantities of zinc, copper, nickel, cobalt, and cadmium. Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R., Inst. Khim. 3, 214-22 '52. (MLRA 6:3)  
(CA 47 no.22:12106 '53)

TALIPOV, Sh. T.      OBEL'CHENKO, P. F.

"Solubility of Some Difficult to Dissolve Silver Salts in Solutions of the  
Systems  $Ag_3PO_4$ - $H_2HPO_4$ - $H_2O$  and  $Ag_3PO_4$  -  $K_2HPO_4$  -  $H_2O$  at  $25^\circ$

Dokl AN Uzb SSR, No. 5, 1952, pp 42-44

abs

W-31098, 26 Nov 54

TALIPOV, Sh.T.; ANTIPOV, V.Ye.

Investigation of solubility in the system aluminum fluoride-lithium fluoride-water at 25°. Trudy Inst. Khim., Akad. Nauk Uzbek. S.S.R. Inst. Khim. 3, 223-9 '52. (MLRA 6:3)  
(CA 47 no.22:11929 '53)

1961 PCV, 211, 1.

✓ Determination of fluorine in insoluble fluorides by the method of I. V. Tananaev, Sh. T. Talipov, Z. T. Sofelkova, and T. B. Amirkhanova. ~~Trudy Gruzinskoi Gos. univ. (Tashkent)~~ 33, No. 4, 76-82 (1952); cf. C.A. 27, 43. When this earlier method was studied by detns. of  $\text{CaF}_2$ , the abs. error was about 2%. The following modified method is proposed. Mix 0.1 g. of fluoride sample and 1 g. ferrosilicon in a 100-ml. round-bottomed flask connected with a thermometer, dropping funnel, and condenser; add 60 ml. of 12N  $\text{H}_2\text{SO}_4$  through the funnel and then pass air into the mixt. while the flask is heated. The distd.  $\text{H}_2\text{SiF}_6$  is collected in a flask contg. KCl. After distn. is complete (as shown by a temp. of  $130^\circ$  in the flask and by cooling of the delivery tube) any  $\text{H}_2\text{SO}_4$  in the distillate is oxidized with  $\text{I}_2$  and the color is removed with  $\text{Na}_2\text{S}_2\text{O}_4$ ; the  $\text{K}_2\text{SiF}_6$  is neutralized to a methyl orange-indigo carmine end point, and then the distillate is titrated to a phenolphthalein end point. With this modified method the error averaged only about 0.30%; results of detns. on natural phosphates approximated those by the Th method. Errors tend to be neg., since the main source of error is incomplete distn. The changes in the method (use of ferrosilicon, passage of air, increasing the amt. of  $\text{H}_2\text{SO}_4$ , etc.) improved the accuracy, shortened the distn. time, and simplified treatment of the distillate. F (11-65 mg.) was detd. as above.

Malcolm Anderson

2

TALIPOV, Sh. T.

✓ Potentiometric titration of microquantities of soluble fluorides. Sh. T. Talipov, I. L. Teodorovich, and N. P. Shestakova. *Trudy brentazist. Gorudarsk. Univ. (Tashkent)* 33, No. 4, 83-90(1962).—An aq. soln. of NaF was placed in a 5-ml. beaker, this was heated at 70–80° and a known vol. (an excess) of 0.0943M  $\text{Ca}(\text{NO}_3)_2$  was added. After cooling, the soln. was dild. with an equal vol. of alc., and one drop of 0.01%  $\text{K}_3\text{Fe}(\text{CN})_6$  soln. and an excess of solid  $\text{NH}_4\text{Cl}$  were added. The beaker was placed in an app. contg. a Pt electrode, which was also a stirrer, and a calomel reference electrode with a salt bridge. The soln. was stirred 1 min., let stand 1 min., and the e.m.f. was detd.; then the excess  $\text{Ca}^{++}$  was titrated with 0.500M  $\text{K}_3\text{Fe}(\text{CN})_6$  according to the equation:  $2\text{NH}_4^+ + \text{Ca}^{++} + [\text{Fe}(\text{CN})_6]^{4-} = \text{Ca}(\text{NH}_4)_2[\text{Fe}(\text{CN})_6]$ . F (0.019–1.90 mg.) was detd. in this way. Addn. of 10 ml. of HOAc (to 0.380 mg. F) or of 2 mg.  $\text{SiO}_2$  or 0.6 mg.  $\text{Na}_2\text{SiO}_3$  with 2 drops of methyl red (to 0.051 mg. F) did not interfere.

Malcolm Anderson

(2)

TALIPOV, Sh. T.

Determination of sodium as  $\text{Na}_2\text{AlF}_6$ . Sh. T. Talipov and Z. T. Solovkova. *Trudy Srednaziat. Gosimuzh. Univ. (Tashkent)* 33, No. 4, 91-3 (1962). —  $\text{NaCl}$  solns. of various concns. (3-20 mg. as Na) were placed in tubes,  $1/4$  their vol. of satd.  $(\text{NH}_4)_2\text{AlF}_6$  (7.66 g./l. at  $25^\circ$ ) was added, and the solns. were centrifuged 4-5 min. The supernatant fluids were decanted and the ppts. were washed 3-4 times with 0.5%  $(\text{NH}_4)_2\text{AlF}_6$ , then 2-3 times with 1:1 alc.- $\text{H}_2\text{O}$ . The ppts. were dried to  $120-30^\circ$  and weighed as  $\text{Na}_2\text{AlF}_6$  (cryo-lyte). The method is rapid and comparable in accuracy to the sulfate method, as detns. on mirabilite by both methods showed.  $\text{F}^-$  ions, given here by hydrolysis of  $(\text{NH}_4)_2\text{AlF}_6$ , lowers the soly. of  $\text{Na}_2\text{AlF}_6$ ; the presence of 0.1 mole/l. of  $\text{F}^-$  reduces the soly. of  $\text{Na}_2\text{AlF}_6$  from  $1.86 \times 10^{-3}$  (in pure  $\text{H}_2\text{O}$ ) to  $6.3 \times 10^{-4}$  moles/l. Presumably the presence of other alkali metals interferes with this method. M. A.

14. Lipov, 20. 1.

✓ Gravimetric determination of magnesium as  $KMgF_6$ .  
Sh. T. Talpov and Z. T. Sofelkova. *Trudy Sredneaziat.  
Gosudarst. Univ.* 33, No. 4, 85-8 (1953).—Solns. contg. var-  
ious concns. of  $MgSO_4$  were placed in tubes with 10 ml. of  
6.5-7%  $KF$  soln., and the colloidal ppts. that formed were  
centrifuged. The supernatant liquids were drained off and  
the ppts. were washed 5 times with 60% alc. (aq.) and 3  
times with 10% alc., the ppts. being centrifuged after each  
washing. The ppts. were dried at  $130^\circ$ , ignited to const.  
wt. at  $450-500^\circ$ , and weighed as  $KMgF_6$ . To det. Mg in  
Al alloys, dissolve a 2-g. sample of alloy in 35 ml. of 25%  
 $NaOH$  and filter; wash the ppt. with hot 1%  $Na_2CO_3$ ; and  
then redissolve in 40 ml. of hot  $HCl$  contg. some  $HNO_3$ .  
Neutralize the combined filtrates with  $NH_4OH$ , and remove  
 $Cu$ ,  $Pb$ ,  $Fe$ , and other elements with  $H_2S$ ; then det. Mg as  
above and also by the phosphate method. The method is  
recommended for up to 0.1 g.  $MgO$ . Best results are given  
with a  $Mg^{++}:KF$  molar ratio of 1:3; when this ratio is too  
high,  $MgF_2$  may be formed. Malcolm Anderson

TALIPOV, Sh. T.

USSR.

✓ Solubility of some slightly soluble silver salts in electrolyte solutions of the systems:  $\text{Ag}_3\text{PO}_4\text{-Na}_2\text{HPO}_4\text{-H}_2\text{O}$  and  $\text{Ag}_3\text{PO}_4\text{-K}_2\text{HPO}_4\text{-H}_2\text{O}$  at 25°. Sh. T. Talipov and P. F. Obel'shenko. *Doklady Akad. Nauk Uzbek. S.S.R.* 1953, No. 5, 42-4; *Referat. Zhur. Khim.* 1954, No. 17845.---The soly. of  $\text{Ag}_3\text{PO}_4$  was studied in solns. of  $\text{Na}_2\text{HPO}_4$  and  $\text{K}_2\text{HPO}_4$  in concns. of  $10^{-2}\text{M}$  to satn. The solid phase at all points of the studied system corresponded to pure  $\text{Ag}_3\text{PO}_4$ . The soly. of  $\text{Ag}_3\text{PO}_4$  did not change on increasing the concn. of the added salt to  $10^{-2}\text{M}$  but increased at higher concns. The soly. product of  $\text{Ag}_3\text{PO}_4$  increased from  $1.83 \times 10^{-23}$  to  $1.21 \times 10^{-23}$  in 0.820M  $\text{Na}_2\text{HPO}_4$  and to  $1.17 \times 10^{-23}$  in 1.51M  $\text{K}_2\text{HPO}_4$ . At the same time the activity product practically did not change. The activity coeff. was calcd. with the aid of the 2nd approximation of the Debye-Hückel equation. M. H. H.

① *fine*



TALIPOV, Sh. T.

"Solubility of Some Difficult-to-Dissolve Silver Salts in Solutions of  
Electrolytes" Dokl AN Uzb SSR, No 7, 1953 pp 29-31

Talipov, Sh. T. ; Obel'chenko, P.F.

abs

W-31098, 26 Nov 54

14-00000

1. Title: Fluoride Ion Determination

2. Abstract: Determination of Fluoride ions using the potentiometric method, J. Biol. Chem., Vol. 193, 1951, 22-24.

3. Summary: Investigated the accuracy of the potentiometric titration of  $\text{Ba}^{2+}$  with  $\text{Ca}^{2+}$  using a calcium ion electrode. The error was  $\pm 1.0\%$ . (J. Biol. Chem., Vol. 193, 1951)

4. Date: 10 Oct 55

TALIPOV, Sh.T.; AKHMEDOV, K.S.

In memoriam Boris Georgievich Zaprometov. Kolloid. Zhur. 15,223-4  
'53. (MLRA 6:5)  
(CA 47 no.17:8428 '53)

Talipov, Sh. T.

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✓ in memoriam Boris Georgievich Zarnometov. Sh. T.  
Talipov and K. S. Akhmedov. Colloid J. U.S.S.R. 13,  
229-30 (1953) (Engl. translation).—See C.A. 47, 8428h.  
H. L. H.